

Advanced Water Purification Demonstration Facility Preliminary Water Quality Monitoring Results

November 2012

The City of San Diego • Public Utilities Department

The Advanced Water Purification Facility (Demonstration Facility) is a component of the Water Purification Demonstration Project. The Demonstration Facility produces one million gallons of purified water per day, and was tested for one year (August 2011 – July 2012). The water quality was measured in accordance with the testing and monitoring plan that the City created with input from the project's Independent Advisory Panel, California Department of Public Health (CDPH), and Regional Water Quality Control Board (RWQCB).

The twelve months of testing and monitoring of the Demonstration Facility are complete. Results of the four quarters of water quality monitoring are presented in the accompanying tables. These data are provisional. Should any transcription errors be found in the data, they will be corrected and included in the final project report projected to be submitted to City Council in early 2013.

Monitoring Locations

The data presented in the accompanying tables is for two sampling locations along the treatment process. Sample site “S1 Tertiary Effluent” is water produced by the existing North City Water Reclamation Plant and is the water fed to the Demonstration Facility. Tertiary effluent is also the water distributed for traditional reclaimed water uses such as irrigation (aka “purple pipe” water). Sample site “S10 AWPF Product” is the fully treated water produced by the Demonstration Facility, and represents the water that would be conveyed to San Vicente Reservoir if the City pursues a full-scale indirect potable reuse reservoir augmentation project.

The seven tables of data presented here are organized based on applicable regulations:

Primary drinking water standards (Table A) and secondary drinking water standards (Table B) - Primary drinking water standards are set to protect public health. Secondary drinking water standards are set for aesthetic qualities of water such as color or taste. The allowable limit for a primary or secondary drinking water standard is called a maximum contaminant level (MCL). More information on drinking water quality regulations can be found at:

<http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx>

Compounds with notification levels (Table C) - CDPH uses health-based notification levels for certain chemicals that do not have established MCLs. In a drinking water system, monitoring results exceeding these notification levels prompts certain requirements and recommendations.

California Toxics Rule (Table D) - The California Toxics Rule was established by the USEPA and applies to discharges into inland surface waters, enclosed bays, and estuaries. There are 126 “Priority Pollutants” in the California Toxics Rule, including 53 compounds not regulated by CDPH; and, thus, not included in tables A, B, or C. Table D shows the 13 priority pollutants that were found at detectable concentrations in the Demonstration Facility product water. Information about the California Toxics Rule can be found at: <http://www.epa.gov/region9/water/ctr/index.html>

Unregulated Contaminant Monitoring Rule, UCMR3 (Table E) - The Unregulated Contaminant Monitoring Rule (UCMR3) requires the collection of data on contaminants the USEPA is considering for potential regulation. Information on this rule can be found at:

<http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/index.cfm>

Constituents of Emerging Concern (Table F) - Constituents of Emerging Concern (CECs) include pharmaceuticals, pesticides, and industrial chemicals for which no regulatory limits have been established. Ninety CECs were monitored at the Demonstration Facility based on the likelihood the compounds might be in wastewater.

Other radionuclides and non-regulated compounds (Table G) - This table presents monitoring data on other non-regulated radionuclides and chemicals that are measured at the Demonstration Facility.

Abbreviations used in the tables

DL: detection limit, the lowest concentration the analytical method can detect

MCL: maximum contaminant level

MDA: minimal detectable activity at 95% confidence interval in a measure of radiation

mg/L: milligrams per liter, parts per million

MFL: million fibers per liter

NA: not applicable

ng/L: nanograms per liter, parts per trillion

Non Corr: non-corrosive

NTU: nephelometric turbidity units, a measure of cloudiness of water

NR: not reported, the result is not reported due to problems with quality control in the analysis

pCi/L: picocuries per liter, a measurement of radiation

pg/L: picograms per liter, parts per quadrillion

RL: reporting limit, the lowest concentration the analytical method can measure within specified limits of precision and accuracy, quantifiable limit

S1: sample site S1, water fed to the Demonstration Facility

S10: sample site S10, water produced by the Demonstration Facility

ug/L: micrograms per liter, parts per billion

<: Concentration measured is below reporting limit (RL) or below detection limit (DL)

City of San Diego Public Utilities Department, Water Purification Demonstration Project
Advanced Water Purification Demonstration Facility (AWPF)
First Quarter through Fourth Quarter Monitoring Results

Table A Primary Drinking Water Standards

Parameter	Method	Units	DL	RL	Sample Date ¹								Primary Drinking Water, MCL	
					8/24/2011		11/8/2011		2/1/2012		5/1/2012			
					Tertiary Effluent	AWPF Product	Tertiary Effluent	AWPF Product	Tertiary Effluent	AWPF Product	Tertiary Effluent	AWPF Product	Federal	California
1,1,1-Trichloroethane	EPA 524.2	ug/L	0.11	0.5	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	200	200
1,1,2,2-Tetrachloroethane	EPA 524.2	ug/L	0.2	0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	1
1,1,2-Trichloroethane	EPA 524.2	ug/L	0.19	0.5	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	5	5
1,1-Dichloroethane	EPA 524.2	ug/L	0.12	0.5	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	-	5
1,1-Dichloroethene	EPA 524.2	ug/L	0.16	0.5	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	7	6
1,2,4-Trichlorobenzene	EPA 524.2	ug/L	0.17	0.5	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	70	5
1,2-Dibromo-3-chloropropane	EPA 504.1	ug/L	0.0034	0.01	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	0.2	0.2
1,2-Dibromoethane (EDB)	EPA 504.1	ug/L	0.0054	0.02	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	0.05	0.05
1,2-Dichloroethane	EPA 524.2	ug/L	0.12	0.5	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	5	5
1,2-Dichloropropane	EPA 524.2	ug/L	0.13	0.5	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	5	5
1,3-Dichloropropene, Total	EPA 524.2	ug/L	0.15	0.5	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	-	0.5
1,3,7,8-Tetra CDD ²	EPA 1613B mod.	pg/L	1.9	10	<10	<9.5	<10	<10	<9.7	<9.5	<5.2	<5.2	30	30
2,4,5-TP (Silvex)	EPA 515.3	ug/L	0.09	0.2	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	50	50
2,4-D	EPA 515.3	ug/L	0.07	0.4	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	70	70
Alachlor	EPA 525.2	ug/L	0.022	0.1	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	<0.022	2	2
Aluminum, Total	EPA 200.8	ug/L	0.61	5	11	<5	8.8	<5	16	<5	6.1	<5	-	1000
Antimony, Total	EPA 200.8	ug/L	0.04	0.5	0.58	<0.04	0.53	<0.5	<0.5	<0.4	<0.5	<0.4	6	6
Arsenic, Total	EPA 200.8	ug/L	0.036	0.4	0.97	<0.036	0.98	<0.036	0.62	<0.036	0.77	<0.4	10	10
Asbestos	EPA 100.2	MFL	NA	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	7	7
Atrazine	EPA 525.2	ug/L	0.034	0.1	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	<0.034	3	1
Barium, Total	EPA 200.8	ug/L	0.03	0.5	22	<0.03	18	<0.03	21	<0.03	20	<0.5	2000	1000
Bentazon	EPA 515.3	ug/L	0.11	2	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	-	18
Benzene	EPA 524.2	ug/L	0.15	0.5	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	5	1
Benzo (a) pyrene	EPA 525.2	ug/L	0.07	0.1	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	0.2	0.2
Beryllium, Total	EPA 200.8	ug/L	0.088	0.1	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	<0.088	4	4
Cadmium, Total	EPA 200.8	ug/L	0.1	5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	400	400
Bis(2-ethylhexyl)adipate	EPA 525.2	ug/L	1.1	3	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	6	4
Bis(2-ethylhexyl)phthalate	EPA 525.2	ug/L	1.1	3	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	3	4
Bromate ¹	EPA 326.0	ug/L	1.2	2.5	<1.2	<0.25	<0.25	<0.25	<0.5	<0.5	<0.25	<0.25	10	10
Cadmium, Total	EPA 200.8	ug/L	0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	5	5
Carbofuran	EPA 531.1	ug/L	0.59	2	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	<0.59	40	18
Carbon tetrachloride	EPA 524.2	ug/L	0.12	0.5	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	5	0.5
Chlordane (tech)	EPA 508	ug/L	0.066	0.1	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066	2	0.1
Chlorite ¹	EPA 300.1	ug/L	0.7	10	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<1.4	<0.7	1000	1000
Chlorobenzene	EPA 524.2	ug/L	0.15	0.5	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	100	70
Chromium, Total	EPA 200.8	ug/L	0.074	0.2	0.25	<0.074	0.56	<0.074	0.52	<0.074	0.28	<0.074	100	50
cis-1,2-Dichloroethene	EPA 524.2	ug/L	0.11	0.5	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	70	6
Copper, Total	EPA 200.8	ug/L	0.27	0.5	1.6	<0.27	1.8	<0.27	1.7	<0.27	1.6	<0.27	1300	1300
Cyanide, Total	EPA 335.4	ug/L	2.7	5	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	200	150
Dalapon	EPA 515.3	ug/L	0.1	0.4	<0.4	<0.1	<0.1	<0.1	<0.4	<0.1	<0.1	<0.1	200	200
Dinoseb	EPA 515.3	ug/L	0.14	0.4	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	7	7
Diquat	EPA 549.2	ug/L	0.9	4	<0.9	<0.9	<4	<0.9	<0.9	<0.9	<0.9	<0.9	20	20
Endothall	EPA 548.1	ug/L	3.5	45	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	100	100
Endrin	EPA 508	ug/L	0.002	0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	2	2
Ethylbenzene	EPA 524.2	ug/L	0.21	0.5	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	700	300
Fluoride, Total	EPA 300.0	mg/L	0.02	0.1	0.61	<0.1	0.63	<0.02	0.54	<0.02	0.71	<0.02	4	2
Freon 113	EPA 524.2	ug/L	0.27	5	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	<0.27	-	1200
gamma-BHC (Lindane)	EPA 508	ug/L	0.0015	0.01	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	0.2	0.2
Glyphosate	EPA 547	ug/L	1.8	5	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	700	700

Note: 1) Results shown as less than (<VALUE) indicate the reported result was less than the RL or DL. In some instances, the RL and/or DL varied during the testing period due to laboratory quality control procedures or changes in method procedures.

2) 'MDA' is the Minimum Detectable Activity at 95% confidence interval in a measure of radiation.

These data cover only a portion of the full testing and monitoring program.

These data are provisional. Should any transcription errors be found in the data, they will be corrected and included in the final project report.

Information concerning the accuracy and appropriate uses of these data will also be included in the final project report.

City of San Diego Public Utilities Department, Water Purification Demonstration Project
Advanced Water Purification Demonstration Facility (AWPF)
First Quarter through Fourth Quarter Monitoring Results

Table A Primary Drinking Water Standards, Continued

Parameter	Method	Units	DL	RL	Sample Date ¹										Primary Drinking Water, MCL			
					8/24/2011		11/8/2011		2/1/2012		5/1/2012							
					Tertiary Effluent	AWPF Product	Federal	California										
Gross Alpha ²	EPA 900.0	pCi/L	NA	See Sample	0.016 (MDA = 0.016)	0.94 (MDA = 0.601)	21 (MDA = 1.117)	<0.968 (MDA = 0.968)	24 (MDA = 1.365)	<0.922 (MDA = 0.922)	7.6 (MDA = 1.110)	<0.902 (MDA = 0.902)	3.4 (MDA = 1.25)	<0.884 (MDA = 0.884)	15 pCi/L	15 pCi/L		
Gross Beta ²	EPA 900.0	pCi/L	NA	See Sample	0.009 (MDA = 0.009)	0.01 (MDA = 0.011)	<0.009 (MDA = 0.009)	50 pCi/L	50 pCi/L									
HAA5, Total	EPA 552.2	ug/L	NA	1	2.6	<1	1.5	<1	4	<1	2.1	<1	60	60				
Heptachlor	EPA 508	ug/L	0.0009	0.01	<0.009 (MDA = 0.009)	0.4	0.01											
Heptachlor epoxide	EPA 508	ug/L	0.0011	0.01	<0.011 (MDA = 0.011)	0.2	0.01											
Hexachlorobenzene	EPA 508	ug/L	0.003	0.01	<0.003 (MDA = 0.003)	1	1											
Hexachlorocyclopentadiene	EPA 508	ug/L	0.014	0.05	<0.014 (MDA = 0.014)	50	50											
Lead, Total	EPA 200.8	ug/L	0.011	0.2	<0.2 (MDA = 0.011)	15	15											
Mercury, Total	EPA 245.1	ug/L	0.0039	0.05	<0.05 (MDA = 0.0039)	<0.039 (MDA = 0.0039)	2	2										
Methoxychlor	EPA 508	ug/L	0.0044	0.01	<0.0044 (MDA = 0.0044)	40	30											
Methyl tert-butyl ether (MTBE)	EPA 524.2	ug/L	0.19	2	<0.19 (MDA = 0.19)	-	13											
Methylene chloride	EPA 524.2	ug/L	0.14	0.5	<0.5 (MDA = 0.14)	5	5											
Molinate	EPA 525.2	ug/L	0.039	0.1	<0.039 (MDA = 0.039)	-	20											
Nickel, Total	EPA 200.8	ug/L	0.13	0.8	3.6	<0.13 (MDA = 0.13)	3.5	<0.13 (MDA = 0.13)	4.4	<0.13 (MDA = 0.13)	3.2	<0.13 (MDA = 0.13)	<0.13 (MDA = 0.13)	-	100			
Nitrate as NO3	EPA 353.2	mg/L	0.36	1	73	3.1	70	2.9	69	3	66	4.3	(as N) 10 (as NO3) 45					
Nitrite as N	EPA 353.2	ug/L	10	100	<100 (MDA = 10)	<10 (MDA = 10)	<100 (MDA = 10)	<10 (MDA = 10)	<100 (MDA = 10)	<10 (MDA = 10)	<10 (MDA = 10)	<10 (MDA = 10)	<10 (MDA = 10)	1000	1000			
NO2+NO3 as N	EPA 353.2	ug/L	20	200	17000 (MDA = 20)	700 (MDA = 20)	16000 (MDA = 20)	660 (MDA = 20)	16000 (MDA = 20)	670 (MDA = 20)	15000 (MDA = 20)	970 (MDA = 20)	10000 (MDA = 20)	10000 (MDA = 20)				
o-Dichlorobenzene	EPA 524.2	ug/L	0.19	0.5	<0.19 (MDA = 0.19)	600	600											
Oxamyl	EPA 531.1	ug/L	0.48	2	<0.48 (MDA = 0.48)	200	50											
PCBs, Total	EPA 508	ug/L	0.049	0.5	<0.049 (MDA = 0.049)	0.5	0.5											
p-Dichlorobenzene	EPA 524.2	ug/L	0.18	0.5	<0.18 (MDA = 0.18)	75	5											
Pentachlorophenol	EPA 515.3	ug/L	0.04	0.2	<0.04 (MDA = 0.04)	1	1											
Perchlorate	EPA 314.0	ug/L	0.95	2	5.8	<0.95 (MDA = 0.95)	4.9	<0.95 (MDA = 0.95)	12	<0.95 (MDA = 0.95)	9.8	<0.95 (MDA = 0.95)	<0.95 (MDA = 0.95)	-	6			
Picloram	EPA 515.3	ug/L	0.05	0.6	<0.05 (MDA = 0.05)	500	500											
Radium 226 ²	EPA 903.1	pCi/L	NA	See Sample	0.439 (MDA = 0.439)	5	5											
Radium 228 ²	EPA Ra-05	pCi/L	NA	See Sample	0.322 (MDA = 0.322)	0.277 (MDA = 0.277)	0.276 (MDA = 0.276)	0.204 (MDA = 0.204)	0.205 (MDA = 0.205)	0.203 (MDA = 0.203)	0.25 (MDA = 0.25)	0.2 (MDA = 0.2)	5	5				
Selenium, Total	EPA 200.8	ug/L	0.28	0.4	0.56	<0.28 (MDA = 0.56)	0.57	<0.28 (MDA = 0.57)	0.48	<0.28 (MDA = 0.48)	0.28	1.1	<0.28 (MDA = 1.1)	50	50			
Simazine	EPA 525.2	ug/L	0.015	0.1	<0.015 (MDA = 0.015)	4	4											
Strontium 90 ²	EPA 905.0	pCi/L	NA	See Sample	0.676 (MDA = 0.676)	0.675 (MDA = 0.675)	0.675 (MDA = 0.675)	0.675 (MDA = 0.675)	0.675 (MDA = 0.675)	0.636 (MDA = 0.636)	0.636 (MDA = 0.636)	0.636 (MDA = 0.636)	8	8				
Styrene	EPA 524.2	ug/L	0.19	0.5	<0.19 (MDA = 0.19)	100	100											
Tetrachloroethene	EPA 524.2	ug/L	0.18	0.5	<0.18 (MDA = 0.18)	5	5											
Thallium, Total	EPA 200.8	ug/L	0.009	0.2	<0.009 (MDA = 0.009)	<0.2 (MDA = 0.2)	<0.2 (MDA = 0.2)	<0.009 (MDA = 0.009)	2	2								
Thiobencarb	EPA 525.2	ug/L	0.025	0.1	<0.025 (MDA = 0.025)	-	70											
THMs, Total	EPA 524.2	ug/L	0.6	2	3	2.2	<2 (MDA = 2.2)	80	80									
Toluene	EPA 524.2	ug/L	0.14	0.5	<0.14 (MDA = 0.14)	1000	150											
Toxaphene	EPA 508	ug/L	0.066	1	<0.066 (MDA = 0.066)	3	3											
trans-1,2-Dichloroethene	EPA 524.2	ug/L	0.11	0.5	<0.11 (MDA = 0.11)	100	10											
Trichloroethene	EPA 524.2	ug/L	0.18	0.5	<0.18 (MDA = 0.18)	5	5											
Trichlorofluoromethane	EPA 524.2	ug/L	0.18	0.5	<0.18 (MDA = 0.18)	-	150											
Tritium ²	EPA 906.0	pCi/L	NA	See Sample	0.423 (MDA = 423)	0.423 (MDA = 423)	0.423 (MDA = 423)	0.423 (MDA = 423)	0.423 (MDA =									

City of San Diego Public Utilities Department, Water Purification Demonstration Project
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Table B Secondary Drinking Water Standards

Parameter	Method	Units	DL	RL	Sample Date ¹								Secondary Drinking Water, MCL			
					8/24/2011		11/8/2011		2/1/2012		5/1/2012					
					S1	S10	Tertiary Effluent	AWPF Product	S1	S10	Tertiary Effluent	AWPF Product	S1	S10	Federal	California
Aluminum, Total	EPA 200.8	ug/L	0.61	5	11	<5	8.8	<5	16	<5	6.1	<5	50 to 200	200		
Chloride, Total	EPA 300.0	mg/L	1	5	250	<5	240	<5	260	<5	270	<5	250	250		
Color	SM2120B	Color Units	NA	3	20	<3	20	<3	15	<3	15	<3	15	15		
Copper, Total	EPA 200.8	ug/L	0.27	0.5	1.6	<0.27	1.8	<0.27	1.7	<0.27	1.6	<0.27	1000	1000		
Iron, Total	EPA 200.7	ug/L	1.1	10	93	<1.1	73	<1.1	110	<1.1	69	<1.1	300	300		
Langelier Index @ 20 C	EPA 200.2	NA	NA	NA	-0.697	-6.64	-0.831	-6.69	-0.832	-6.59	-0.784	-6.15	Non Corr.	Non Corr.		
Manganese, Total	EPA 200.8	ug/L	0.11	0.2	110	<0.11	70	<0.11	93	0.37	72	<0.2	50	50		
MBAS	SM 5540 C	mg/L	0.019	0.05	0.063	<0.019	<0.05	<0.019	0.054	<0.019	0.07	<0.019	0.5	0.5		
Methyl tert-butyl ether (MTBE)	EPA 524.2	ug/L	0.19	2	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	-	5		
Silver, Total	EPA 200.8	ug/L	0.027	0.2	<0.027	<0.027	<0.027	<0.027	<0.027	<0.027	0.21	<0.2	100	100		
Specific Conductance (EC)	SM2510B	umhos/cm	0.47	4	1500	22	1100	16	1400	20	1500	26	-	900		
Sulfate as SO4	EPA 300.0	mg/L	0.1	0.5	170	<0.1	130	<0.5	150	<0.1	180	<0.5	250	250		
Thiobencarb	EPA 525.2	ug/L	0.025	0.1	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	-	1		
Threshold Odor Number	EPA 140.1	T.O.N.	NA	1	10	<1	2	<1	20	<1	10	<1	3	3		
Total Dissolved Solids	SM2540C	mg/L	4	10	850	16	760	16	710	13	650	11	500	500		
Turbidity	EPA 180.1	NTU	0.024	0.1	0.35	<0.024	<0.024	<0.024	0.17	<0.024	<0.024	<0.024	5	5		
Zinc, Total	EPA 200.8	ug/L	1.1	5	66	<1.1	48	<1.1	100	<1.1	36	<1.1	5000	5000		

Note: 1) Results shown as less than (<VALUE) indicate the reported result was less than the RL or DL. In some instances, the RL and/or DL varied during the testing period due to laboratory quality control procedures or changes in method procedures.

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Table C Compounds with CDPH Drinking Water Notification Levels

Parameter	Method	Units	DL	RL	Sample Date ¹								CDPH Drinking Water Notification Level
					8/24/2011		11/8/2011		2/1/2012		5/1/2012		
					S1	S10	Tertiary Effluent	AWPF Product	S1	S10	Tertiary Effluent	AWPF Product	S1
1,2,3-Trichloropropane	SRL 524M-TCP	ug/L	0.0012	0.005	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	0.005
1,2,4-Trimethylbenzene	EPA 524.2	ug/L	0.2	0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	330
1,3,5-Trimethylbenzene	EPA 524.2	ug/L	0.17	0.5	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	330
1,4-Dioxane	EPA 8270M	ug/L	0.04	0.5	1.8	<0.04	5.6	<0.04	1.2	<0.04	1.6	<0.04	1
2,4,6-Trinitrotoluene ¹	EPA 8330A	ug/L	0.2	2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	1
2-Chlorotoluene	EPA 524.2	ug/L	0.15	0.5	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	140
4-Chlorotoluene	EPA 524.2	ug/L	0.15	0.5	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	140
Methyl isobutyl Ketone (MIBK)	EPA 524.2	ug/L	0.56	5	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	<0.56	120
Boron, Total	EPA 200.8	ug/L	0.28	1	400	240	340	210	360	200	370	290	1000
Carbon Disulfide	EPA 524.2	ug/L	0.13	0.5	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	160
Chlorate	EPA 300.1	ug/L	0.95	10	16	<0.95	580	<10	88	<0.95	14	<0.95	800
Diazinon	EPA 525.2	ug/L	0.096	0.1	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	1.2
Dichlorodifluoromethane (Freon 12)	EPA 524.2	ug/L	0.12	0.5	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	1000
Ethylene glycol ²	EPA 8015B	mg/L	11	50	<11	<11	<11	<11	<11	<11	<50	<50	14
Formaldehyde	EPA 556	ug/L	0.26	2	6.8	8.9	6	11	8.2	5.7	8.5	6.5	100
HMX ¹	EPA 8330A	ug/L	3	10	<3	<0.59	<1.5	<0.3	<1.5	<0.3	<1.5	<0.3	350
Isopropylbenzene	EPA 524.2	ug/L	0.18	0.5	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	770
Manganese, Total	EPA 200.8	ug/L	0.11	0.2	110	<0.11	70	<0.11	93	0.37	72	<0.2	500
Naphthalene	EPA 524.2	ug/L	0.42	0.5	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	<0.42	17
n-Butylbenzene	EPA 524.2	ug/L	0.29	0.5	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	<0.29	260
N-Nitrosodiethylamine	EPA 521	ng/L	0.72	2	<2	<0.72	<0.72	<0.72	<2	5.7	<2	4.9	10
N-Nitrosodimethylamine ¹	EPA 521	ng/L	0.28	2.2	2.9	<2	<2	<0.28	<2	<2	5.2	<2.2	10
N-Nitrosod-n-propylamine	EPA 521	ng/L	0.35	2.2	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<0.35	<2.2	10
n-Propylbenzene	EPA 524.2	ug/L	0.18	0.5	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	260
Propachlor	EPA 508	ug/L	0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	90
RDX ¹	EPA 8330A	ug/L	0.32	2	<0.32	<0.32	<0.16	<0.16	<0.8	<0.16	<0.8	<0.16	0.3
sec-Butylbenzene	EPA 524.2	ug/L	0.24	0.5	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	260
Tert-butyl alcohol	EPA 524.2	ug/L	0.45	2	<0.45	<0.45	<2	<0.45	<0.45	<0.45	<0.45	<0.45	12
tert-Butylbenzene	EPA 524.2	ug/L	0.18	0.5	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	260
Vanadium, Total	EPA 200.8	ug/L	0.047	0.5	1.1	<0.5	<0.047	<0.047	0.8	<0.5	0.81	<0.047	50

Note: 1) Results shown as less than (<VALUE) indicate the reported result was less than the RL or DL. In some instances, the RL and/or DL varied during the testing period due to laboratory quality control procedures or changes in method procedures.

2) Additional testing was conducted for ethylene glycol at sample locations S1 and S10 using a more sensitive method (EPA 8270 C DL = 0.5 mg/L; RL = 1 mg/L). Samples from each location were collected on 8/13/12 and 8/15/12. All results were <0.5 mg/L.

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These data are provisional. Should any transcription errors be found in the data, they will be corrected and included in the final project report.

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City of San Diego Public Utilities Department, Water Purification Demonstration Project
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Table D California Toxics Rule¹

Parameter	Method	Units	DL	RL	Sample Date ²				Fresh Water Criterion Continuous Conc. Aquatic ³ (ug/l)	Human Health Criterion for the Consumption of Water & Organisms ³ (ug/l)
					8/24/2011	11/8/2011	2/1/2012	5/1/2012		
					S10 AWPF Product	S10 AWPF Product	S10 AWPF Product	S10 AWPF Product		
2,3,7,8-Tetra CDD ²	EPA 1613B mod.	pg/L	varies	10	<9.5	<10	<9.5	<5.2		0.000000013 [c]
Antimony, Total	EPA 200.8	ug/L	0.04	0.5	<0.04	<0.5	<0.04	<0.04		14 [a,s]
Arsenic, Total	EPA 200.8	ug/L	0.036	0.4	<0.036	<0.036	<0.036	<0.4	150 [i,m,w]	
Asbestos	EPA 100.2	MFL	0	0.2	<0.2	<0.2	<0.2	<0.2		7 MFL [k,s]
Bromodichloromethane	EPA 524.2	ug/L	0.09	0.5	0.78	<0.5	<0.5	<0.5		0.56 [a,c]
Chloroform	EPA 524.2	ug/L	0.12	0.5	1.4	<0.5	<0.12	<0.5		Reserved
Diethyl phthalate	EPA 625	ug/L	0.15	1	<1	<0.15	<0.15	<0.15		23000 [a,s]
Dimethyl phthalate	EPA 625	ug/L	0.18	1	<1	<0.18	<0.18	<0.18		313000 [s]
Di-n-butyl phthalate	EPA 625	ug/L	0.24	1	2.2	<0.24	<0.24	<0.24		2700 [a,s]
Lead, Total	EPA 200.8	ug/L	0.011	0.2	<0.2	<0.2	<0.011	<0.011	2.5 [e,i,m]	[n]
Mercury, Total	EPA 245.1	ug/L	0.0039	0.05	<0.05	<0.05	<0.05	<0.0039	Reserved	0.050 [a]
Methylene chloride	EPA 524.2	ug/L	0.14	0.5	<0.5	<0.14	<0.5	<0.5		4.7 [a,c]
Silver, Total	EPA 200.8	ug/L	0.027	0.2	<0.027	<0.027	<0.027	<0.2		

Note: 1) These results are for California Toxics Rule compounds that were detected in the AWPF Product and not included in Tables A, B, or C.

2) Results shown as less than (<VALUE) indicate the reported result was less than the RL or DL. In some instances, the RL and/or DL varied during the testing period due to laboratory quality control procedures or changes in method procedures.

3) The letters [a], [c], [n], etc refer to notes in Federal Register/Vol. 65, No. 97/Thursday, May 18, 2000/Rules and Regulations.
<http://www.epa.gov/fedrgstr/EPA-WATER/2000/May/Day-18/w11106.pdf>

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Table E Unregulated Contaminant Monitoring Rule (UCMR3)

Parameter	Method	Units	DL	RL	Sample Date ¹							
					8/24/2011		11/8/2011		3/8/2012		5/1/2012	
					S1	Tertiary Effluent	S10	AWPF Product	S1	Tertiary Effluent ²	S10	AWPF Product ²
1,1-Dichloroethane ¹	EPA 524.3	ng/L	15	30	<15		<15		<15		<15	<10
1,2,3-Trichloropropane ¹	EPA 524.3	ng/L	15	30	<15		<15		<15		<15	<4.6
1,3-butadiene ¹	EPA 524.3	ng/L	50	100	<50		<50		<50		<50	<37
1,4-Dioxane	EPA 522	ug/L	0.035	0.07	0.948		<0.035		4.24		<0.035	1.2
17 alpha-Ethynodiol	EPA 539	ug/L	0.0001	0.0004	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001
17-beta-Estradiol	EPA 539	ug/L	0.0001	0.0009	<0.0001		<0.0001		<0.0001		<0.0009	<0.0001
4-androstene-3, 17-dione	EPA 539	ug/L	0.00004	0.0003	0.0012		<0.00004		0.0018		<0.0003	<0.0004
Bromoform ³	EPA 524.3	ng/L	30	60	220		230		260		190	230
Bromomethane ¹	EPA 524.3	ng/L	100	200	<100		<100		<100		<100	<35
Chlorate	UCMR 300.1	ug/L	2	20	<2		<2		580		<20	<2
Chlorodifluoromethane	EPA 524.3	ng/L	40	80	<40		<40		<40		<40	<6.8
Chloromethane	EPA 524.3	ng/L	100	200	<100		<100		<100		<100	<200
Chromium	UCMR 200.8	ug/L	0.021	0.3	1.06		<0.021		<0.021		0.364	<0.021
Cobalt	UCMR 200.8	ug/L	0.28	1	<1		<0.28		<0.28		<0.28	<0.28
Equilin	EPA 539	ug/L	0.0004	0.004	<0.0004		<0.0004		<0.0004		<0.0004	<0.0004
Estriol	EPA 539	ug/L	0.0002	0.0008	<0.0002		<0.0002		<0.0002		<0.0002	<0.0002
Estrone	EPA 539	ug/L	0.0002	0.002	0.0047		<0.0002		<0.0002		0.0043	<0.0002
Hexavalent chromium (Dissolved) ³	EPA 218.6/218.7	ug/L	0.009	0.03	<0.009		0.09		<0.009		0.083	<0.03
Molybdenum	UCMR 200.8	ug/L	0.057	1	7.95		<0.057		7.5		<0.057	6.2
n-Propylbenzene ¹	EPA 524.3	ng/L	15	30	<15		<15		<15		<15	<5.4
Perfluoro octanesulfonic acid - PFOS	EPA 537	ug/L	0.0023	0.04	<0.0023		<0.0023		<0.04		<0.0023	<0.04
Perfluoro-1-butanesulfonic acid - PFBS	EPA 537	ug/L	0.0018	0.09	<0.0018		<0.0018		<0.09		<0.0018	<0.09
Perfluoro-1-hexanesulfonic acid - PFHxS	EPA 537	ug/L	0.002	0.03	<0.002		<0.002		<0.03		<0.002	<0.002
Perfluoroheptanoic acid - PFHpA	EPA 537	ug/L	0.0031	0.01	0.032		<0.0031		0.036		<0.01	0.023
Perfluoro-n-nonanoic acid - PFNA	EPA 537	ug/L	0.0022	0.02	<0.0022		<0.0022		<0.02		<0.0022	<0.02
Perfluorooctanoic acid - PFOA	EPA 537	ug/L	0.0035	0.02	0.17		<0.0035		0.29		<0.0035	0.23
sec-Butylbenzene ¹	EPA 524.3	ng/L	20	40	<20		<20		<20		<20	<1.5
Strontium ³	UCMR 200.8	ug/L	0.016	0.3	577		<0.016		405		<0.016	610
Testosterone	EPA 539	ug/L	0.00002	0.0001	<0.00002		<0.00002		<0.00002		<0.00002	<0.00002
Vanadium	UCMR 200.8	ug/L	0.011	0.2	1.24		<0.011		0.77		<0.011	0.79

Note: 1) Results shown as less than (<VALUE) indicate the reported result was less than the RL or DL. In some instances, the RL and/or DL varied during the testing period due to laboratory quality control procedures or changes in method procedures.

2) Results shown in **BOLD** are for samples taken on 1/18/12

3) Results of this constituent is discussed in the final project report.

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Table F Constituents of Emerging Concern (CECs)

Parameter	Method	Units	DL	RL	Sample Date ¹							
					8/15/2011		9/14/2011		10/17/2011		11/8/2011	
					S1	Tertiary Effluent	S10	AWPF Product	S1	Tertiary Effluent	S10	AWPF Product
1,7-Dimethylxanthine	LC-MS-MS	ng/L	3.4	10	<10	<3.4	<3.4		<3.4	<3.4	<3.4	<3.4
2,4-D	LC-MS-MS	ng/L	5	5	49	<5	2000	<5	<5	<5	<5	<5
4-nonylphenol - semi quantitative	LC-MS-MS	ng/L	50	100	1400	<50	410	<100	200	<50	330	<50
4-tert-Octylphenol	LC-MS-MS	ng/L	6.9	50	<50	<6.9	<50	<6.9	<50	<6.9	<6.9	<6.9
Acesulfame-K ²	LC-MS-MS	ng/L	20	20	27000	<20	29000	50	33000	<20	28000	<20
Acetaminophen	LC-MS-MS	ng/L	3	5	<3	<3	<5	<3	<3	<3	10	<3
Albuterol	LC-MS-MS	ng/L	2.4	5	9.6	<5	8.1	<2.4	9.9	<2.4	10	<2.4
Amoxicillin (semi-quantitative)	LC-MS-MS	ng/L	6.4	20	1400	<6.4	470	<6.4	960	<20	320	<6.4
Androstanedione	LC-MS-MS	ng/L	1.7	5	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
Atenolol	LC-MS-MS	ng/L	3.9	5	670	<3.9	250	<3.9	59	<3.9	150	<3.9
Atrazine	LC-MS-MS	ng/L	2.3	5	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3
Azithromycin	LC-MS-MS	ng/L	10	20	NR	NR	NR	NR	NR	NR	NR	NR
Bendroflumethiazide	LC-MS-MS	ng/L	4.4	5	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4
Bezafibrate	LC-MS-MS	ng/L	3.5	5	6	<3.5	7.6	<3.5	<3.5	<3.5	<3.5	<3.5
BPA	LC-MS-MS	ng/L	7.2	10	<7.2	<7.2	74	<7.2	<7.2	<7.2	<7.2	<7.2
Bromacil	LC-MS-MS	ng/L	3.2	5	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
Butabital	LC-MS-MS	ng/L	2.9	5	16	<2.9	39	<2.9	25	<2.9	21	<2.9
Butylparaben	LC-MS-MS	ng/L	3.3	5	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
Caffeine	LC-MS-MS	ng/L	4.3	5	77	<4.3	61	<4.3	36	<4.3	20	<4.3
Carbadox	LC-MS-MS	ng/L	4.2	5	8.6	<4.2	13	<4.2	5.7	<4.2	<4.2	<4.2
Carbamazepine	LC-MS-MS	ng/L	1.2	5	300	<1.2	190	<1.2	190	<1.2	170	<1.2
Carisoprodol	LC-MS-MS	ng/L	1.2	5	150	<1.2	42	<1.2	62	<1.2	52	<1.2
Chloramphenicol	LC-MS-MS	ng/L	3.1	10	<3.1	<3.1	<10	<3.1	<3.1	<3.1	<3.1	<3.1
Chloridazon	LC-MS-MS	ng/L	1.6	5	<5	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
Chlorotoluron	LC-MS-MS	ng/L	0.89	5	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89	<0.89
Cimetidine	LC-MS-MS	ng/L	2.7	5	62	<2.7	22	<2.7	12	<2.7	<2.7	<2.7
Clofibric Acid	LC-MS-MS	ng/L	5	5	<5	<5	<5	<5	<5	<5	<5	<5
Cotinine	LC-MS-MS	ng/L	4.8	10	44	<10	<10	<4.8	25	<4.8	31	<4.8
Cyanazine	LC-MS-MS	ng/L	1.7	5	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7
DACT	LC-MS-MS	ng/L	3.9	5	36	<3.9	32	<3.9	26	<3.9	21	<3.9
DEET ²	LC-MS-MS	ng/L	1.1	10	30	<1.1	63	<1.1	180	<1.1	160	<10
Deethylatrazine	LC-MS-MS	ng/L	1.5	5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Dehydronifedipine	LC-MS-MS	ng/L	1.4	5	160	<5	120	<5	360	<1.4	40	<1.4
DIA	LC-MS-MS	ng/L	2.4	5	5.5	<2.4	<5	<2.4	<5	<2.4	<5	<2.4
Diazepam	LC-MS-MS	ng/L	2.1	5	<5	<2.1	<5	<2.1	<2.1	<2.1	<2.1	<2.1
Diclofenac	LC-MS-MS	ng/L	3.3	5	60	<3.3	59	<3.3	59	<3.3	95	<3.3
Dilantin	LC-MS-MS	ng/L	13	20	86	<13	79	<13	110	<13	130	<13
Diuron	LC-MS-MS	ng/L	1.8	5	42	<5	60	<1.8	74	<5	61	<1.8
Erythromycin	LC-MS-MS	ng/L	4	10	45	<4	58	<4	25	<4	45	<4
Estradiol	LC-MS-MS	ng/L	4.4	5	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4
Estrone	LC-MS-MS	ng/L	3.9	5	16	<3.9	10	<3.9	<3.9	<3.9	<3.9	<3.9
Ethynodiol Estradiol - 17 alpha	LC-MS-MS	ng/L	3.3	5	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
Ethylparaben	LC-MS-MS	ng/L	11	20	<11	<11	<11	<11	<11	<11	<11	<11
Flumegaine	LC-MS-MS	ng/L	7.1	10	<7.1	<7.1	<7.1	<7.1	<7.1	<7.1	<7.1	<7.1
Fluoxetine	LC-MS-MS	ng/L	10	10	34	<10	50	<10	39	<10	28	<10
Gemfibrozil	LC-MS-MS	ng/L	2.5	5	68	<2.5	73	<2.5	34	<2.5	28	<2.5

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Table F Constituents of Emerging Concern (CECs), Continued

Parameter	Method	Units	DL	RL	Sample Date ¹							
					8/15/2011		9/14/2011		10/17/2011		11/8/2011	
					S1	Tertiary Effluent	S10	AWPF Product	S1	Tertiary Effluent	S10	AWPF Product
Hydrazine	LC-MS-MS	ng/L	2.5	5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Ibuprofen	LC-MS-MS	ng/L	8.6	15	<8.6	<8.6	20	<8.6	<8.6	<15	<8.6	<8.6
Iohexal ²	LC-MS-MS	ng/L	7.7	10	3100	<7.7	9500	19	4500	<7.7	4100	<7.7
Iopromide	LC-MS-MS	ng/L	1.6	5	140	<1.6	93	<1.6	<5	<1.6	27	<1.6
Isobutylparaben	LC-MS-MS	ng/L	4.2	5	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2
Isoproteron	LC-MS-MS	ng/L	12	100	<12	<12	<12	<12	<12	<12	<100	<12
Ketoprofen	LC-MS-MS	ng/L	2.6	5	10	<2.6	11	<2.6	38	<2.6	<5	<2.6
Ketorolac	LC-MS-MS	ng/L	2.1	5	16	<2.1	<2.1	<2.1	<5	<2.1	<5	<2.1
Lidocaine	LC-MS-MS	ng/L	1.1	5	78	<1.1	100	<1.1	90	<1.1	120	<1.1
Lincomycin	LC-MS-MS	ng/L	1.7	10	<10	<1.7	<10	<1.7	<1.7	<1.7	<10	<1.7
Linuron	LC-MS-MS	ng/L	2.8	5	<5	<2.8	<2.8	<2.8	<2.8	<2.8	6.3	<2.8
Lopressor	LC-MS-MS	ng/L	5.1	20	400	<5.1	280	<5.1	<5.1	<5.1	270	<5.1
Meclofenamic Acid	LC-MS-MS	ng/L	4.7	5	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7
Meprobamate	LC-MS-MS	ng/L	2	5	110	<5	130	<2	92	<2	120	<2
Metazachlor	LC-MS-MS	ng/L	1.3	5	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
Methylparaben	LC-MS-MS	ng/L	11	20	<11	<11	<11	<11	<11	<20	<11	<11
Naproxen	LC-MS-MS	ng/L	8.5	10	<8.5	<8.5	<8.5	<8.5	13	<8.5	19	<8.5
Nifedipine	LC-MS-MS	ng/L	12	20	48	<12	<12	<12	40	<12	57	<12
Norethisterone	LC-MS-MS	ng/L	2.3	5	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<5	<2.3
Oxolinic acid ²	LC-MS-MS	ng/L	2.5	10	19	<10	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Pentoxifylline	LC-MS-MS	ng/L	1.5	5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Phenazone	LC-MS-MS	ng/L	5	5	<5	<5	<5	<5	<5	<5	<5	<5
Primidone	LC-MS-MS	ng/L	4.8	5	110	<4.8	83	<4.8	76	<4.8	65	<4.8
Progesterone	LC-MS-MS	ng/L	2.9	5	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9
Propazine	LC-MS-MS	ng/L	1.8	5	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8
Propylparaben	LC-MS-MS	ng/L	2.9	5	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9
Quinoline	LC-MS-MS	ng/L	2.5	5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Simazine	LC-MS-MS	ng/L	1.2	5	7.6	<1.2	8.4	<1.2	11	<1.2	7.4	<1.2
Sucralose	LC-MS-MS	ng/L	42	100	48000	<42	34000	<42	50000	<42	26000	<100
Sulfachloropyridazine	LC-MS-MS	ng/L	2.1	5	<2.1	<2.1	<2.1	<2.1	<2.1	<2.1	<5	<2.1
Sulfadiazine	LC-MS-MS	ng/L	3.9	5	<3.9	<3.9	<3.9	<3.9	<3.9	<3.9	<5	<3.9
Sulfadimethoxine	LC-MS-MS	ng/L	1.6	5	<1.6	<5	<1.6	<5	<1.6	<1.6	<1.6	<1.6
Sulfamerazine	LC-MS-MS	ng/L	4.6	5	16	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6
Sulfamethazine	LC-MS-MS	ng/L	1.5	5	<5	<5	<1.5	<1.5	<5	<1.5	<1.5	<1.5
Sulfamethizole	LC-MS-MS	ng/L	3.2	5	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
Sulfamethoxazole	LC-MS-MS	ng/L	2.8	5	820	<2.8	480	<2.8	470	<2.8	780	<2.8
Sulfathiazole	LC-MS-MS	ng/L	2.4	5	<2.4	<5	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4
TCEP	LC-MS-MS	ng/L	3.2	10	160	<5	380	<3.2	520	<10	410	<3.2
TCPP	LC-MS-MS	ng/L	5	5	NR	NR	NR	NR	NR	NR	NR	NR
TDCPP	LC-MS-MS	ng/L	20	100	500	<20	650	<20	710	<20	320	<20
Testosterone	LC-MS-MS	ng/L	2.5	5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Theobromine	LC-MS-MS	ng/L	3.2	10	<3.2	<10	25	<3.2	<3.2	<3.2	<3.2	<3.2
Theophylline	LC-MS-MS	ng/L	4.8	10	<4.8	<4.8	57	<4.8	<4.8	<4.8	<4.8	<4.8
Triclosan ²	LC-MS-MS	ng/L	6.3	10	120	<6.3	44	19	140	<6.3	84	<6.3
Trimethoprim	LC-MS-MS	ng/L	1.8	5	150	<1.8	100	<1.8	200	<1.8	120	<1.8
Warfarin	LC-MS-MS	ng/L	4.1	5	<5	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1

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Table G Other Radionuclides & Non-regulated Compounds

Parameter	Method	Units	DL	RL	Sample Date ¹									
					8/24/2011		11/8/2011		2/1/2012		5/1/2012		7/9/2012	
					S1 Tertiary Effluent	S10 AWPF Product								
Cesium - 137 ²	Gamma Ray Spectrometry	pCi/L	NA	See Sample	<11.1 (MDA = 11.1)	<10.2 (MDA = 10.2)	<16.7 (MDA = 16.7)	<16 (MDA = 16)	<23.1 (MDA = 23.1)	<23.7 (MDA = 23.7)	<20.3 (MDA = 20.3)	<15 (MDA = 15)	Not Sampled	Not Sampled
Iodine - 129 ²	X-Ray Spectrometry	pCi/L	NA	See Sample	<3.86 (MDA = 3.86)	<3.25 (MDA = 3.25)	<2.4 (MDA = 2.4)	<4.17 (MDA = 4.17)	<3.86 (MDA = 3.86)	<3.47 (MDA = 3.47)	<2.16 (MDA = 2.16)	<3.73 (MDA = 3.73)	<0.57 (MDA = 0.57)	<0.64 (MDA = 0.64)
Iodine - 131 ²	Gamma Ray Spectrometry	pCi/L	NA	See Sample	46.6 (MDA = 18.2)	<16 (MDA = 16)	<27.9 (MDA = 27.9)	<21.6 (MDA = 21.6)	<11.3 (MDA = 11.3)	<23.0 (MDA = 23.0)	<38.7 (MDA = 38.7)	<24.6 (MDA = 24.6)	3.03 (MDA = 1.64)	<0.15 (MDA = 0.15)
Benzo (k) fluoranthene	EPA 525.2	ug/L	0.09	0.5	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	Not Sampled	Not Sampled
Hexavalent chromium (Dissolved)	EPA 218.6	ug/L	0.0059	0.3	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	Not Sampled	Not Sampled
Lithium, Total	EPA 200.7	ug/L	1.4	10	26	<1.4	20	<1.4	23	<10	28	<10	Not Sampled	Not Sampled

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2) 'MDA' is the Minimum Detectable Activity at 95% confidence interval in a measure of radiation.

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